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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,366	04/12/2004	Dan R. Dwyer	200310765-1	4857
22879	7590	06/23/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			KOVAL, MELISSA J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/823,366	<b>Applicant(s)</b> DWYER ET AL.	
	<b>Examiner</b> Melissa J. Koval	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-11, 14-16, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chino et al. U.S. Patent 6,334,687 B1.

See Figures 1 through 3 of Chino et al. '687 B1.

Claim 1 sets forth: "A display device for projecting an image alternatively onto a remote surface and a rear projection screen, the display device comprising:

a base (base table 100.);

a projector affixed to the base (image projection device 20);

a rear projection screen mounted on the base (See screen unit 540. Refer to column 4, lines 49 through 57. See support pipes 210 and attitude keeping members 620 located between the base table 100 and support pipes 210 as well as between the support pipes and mirror frame 420 connected to screen frame 520.);

a housing extending rearward of the rear projection screen, the housing having an opening formed therein (Open areas can be seen in Figures 1 through 3 with respect to the support structures already discussed that are disposed rearward of the projection screen.);

a mirrored surface within the housing, the mirrored surface angled to reflect light from the projector onto the rear projection screen (Mirror unit 400 supported by mirror frame 420.); and

wherein the rear projection screen and the housing are pivotal on the base for selectively exposing the projector for projection onto the remote surface and engaging the projector within the opening for projection through the opening at the mirrored surface." The support legs can be raised and lowered by means of extension fixing members 260 such that the projector can project on to the mirror and screen arrangement or alternatively on a remote surface when the mirror and screen arrangement are moved out of the way.

Claim 2 sets forth: "The display device of claim 1 wherein the housing is collapsible." See Figure 6.

Claim 3 sets forth: "The display device of claim 2 further including a support structure for the mirrored surface, wherein the support frame is collapsible within the housing." See Figure 6.

Claim 4 sets forth: "The display device of claim 1 wherein the rear projection screen is detachable from the base." See column 3, lines 21 and 22.

Claims 6 through 11, 14 through 16, are rejected for the same reasons already applied to claims 1 through 4 above.

With respect to claims 19 through 21, the projector is concealed in the folded state. Again see Figure 6.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 12, 13, 17, 18, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chino et al. U.S. Patent 6,334,687 B1 in view of Okada et al. U.S. Patent 5,895,110.

Chino et al. '687 B1 teach all of the elements of claim 5, as discussed in the rejection above, except that '687 B1 is silent to the presence of adjustable focusing means. Chino et al. '687 B1 teach an image projection device 20 in a box with a projection lens and speakers on the face. See column 3, lines 57 through 67, and column 4, lines 1 and 2. The components comprising the projector of Chino et al. are not discussed.

Adjustable focus means are notoriously well known in the art as taught by Okada et al. '110. Okada et al. U.S. Patent 5,895,110 teach a box-like LCD projector comprising adjustable focusing means. See column 3, lines 31 through 44, of '110, for example.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made that a projector with the ability to project on at least two different surfaces, as claimed, and as taught by Chino et al. '687 B1 may require an adjustable focusing means. One having ordinary skill in the art would be motivated to

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substitute the projection device with adjustable focus means taught by Okada et al. '110 for the image projection device 20 shown by Chino et al. '687 B1 to easily improve the image quality for the viewer, thus meeting the limitations of claims 5, 12, 17, and 22.

The teaching of Chino et al. '687 B1 is also silent to aspect ratio. However, 4:3 and 16:9 are standard aspect ratios found in LCD projectors. See column 2, lines 50 through 56 of Okada et al. '110. Also see column 4, lines 44 through 67, and column 5, lines 1 through 3. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made that a projector with the ability to project on at least two different surfaces, as claimed, and as taught by Chino et al. '687 B1 may require adjustable aspect ratio to accompany an adjustable focusing means. One having ordinary skill in the art would be motivated to substitute the projection device with adjustable aspect ratio as taught by Okada et al. '110 for the image projection device 20 shown by Chino et al. '687 B1 to provide an image for the viewer with distortion eliminated, thus meeting the limitations of claims 13, 18, and 23.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hiller et al. U.S. Patent 6,233,024 B1 teaches a rear projector.

Li et al. U.S. Patent 6,637,896 B2 teaches a compact projection system and associated device.

Bartlett U.S. Patent 4,755,881 teaches a transportable video apparatus.

Lieberman et al. U.S. patent 5,510,862 teaches a collapsible large screen audiovisual display system.

Ramachandran et al. U.S. Patent Application Publication US 2004/0141157 A1 teaches an image projection system and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J. Koval whose telephone number is (571) 272-2121. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJK



Handwritten signature of Melissa J. Koval, with the name "Melissa J. Koval" written below it.